



Amendments to the Drawings:

The drawing sheets attached in connection with the above-identified application containing Figures 1, 2, and 4 are being presented as sheets to be substituted for the previously submitted drawing sheets. Figures 1, 2, and 4 have been amended. Appended to this amendment is an annotated copy of the previous drawing sheet which has been marked to show changes presented in the replacement sheet of the drawing.

The specific changes, which have been made to Figure 1, are: reference numeral "15" was changed to reference numeral "15a;" primary-pulley pressure sensor 15b, text "(Ppri)," and reference numeral "15b" and its leader line have been added, reference numeral "3a" has been added; reference numerals "12" and "16" have been moved; and the transmission ECU 12 has be elongated.

The specific change which has been made to Figure 2, is "15" has been changed to "15a."

The specific change, which has been made to Figure 4, is "HIGT" has been changed to "HIGH."

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 1-9 remain pending in this application.

Applicant would like to thank the Examiner for the careful consideration given to the claims.

Priority

Applicant respectfully requests the acknowledgement of the receipt of the certified copy of the priority document, Japanese Application 2002-290345, filed 10/02/2002.

Objection to the Specification

The disclosure is objected to because “toque” should be “torque” on page 7, line 18. The specification has been amended to correct this informality. Favorable reconsideration is respectfully requested.

Rejection of Claim 4 under 35 U.S.C. § 112

Claim 4 is rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enable requirement and under 35 U.S.C. § 112, second paragraph, as being indefinite. Particularly, it is asserted that the disclosure does not explicitly disclose details of the smoothing process of the signals and the term “smoothing processing” is indefinite. These rejections are traversed for at least the following reasons. First, claim 4 does not require smoothing processing but claims 3, 6, and 9 do require smoothing processing.

As far as the rejections may be applicable to claims 3, 6, and 9, it is respectfully submitted that the term “smoothing process” is known and clear to one with ordinary skill in the art. In particular, “smoothing processes” can be a process in which noise from a signal is reduced by reducing the values of points that are higher or lower than their adjacent points. For example, the attached Exhibit A is from the website <http://www.wam.umd.edu/~toh/spectrum/Smoothing.html> (as it appeared on May 27, 2001), which shows one example of a smoothing operation. Thus, one with ordinary skill in the art would understand what is meant by the smoothing process and would have been enabled to practice the invention as recited in claims 3, 6, and 9.

For at least these reasons, favorable reconsideration is respectfully requested.

Rejection of Claims 1-2, 4-5, and 7-8 based on Tokoro

Claims 1-2, 4-5, and 7-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,631,043 (“Tokoro”). This rejection is traversed for at least the reason that Tokoro fails to disclose or teach the present invention.

For example, claim 1 recites an ECU programmed to “input a first torque signal obtained by estimating an engine torque in accordance with vehicle operating conditions and the target shift ratio; input a second torque signal obtained by detecting the engine torque; synthesize the first and second torque signals to provide an estimated-torque signal; and control the line pressure in accordance with the estimated-torque signal.” Claim 4 requires a similar feature. Tokoro does not teach or suggest this feature.

In particular, Tokoro discloses a torque sensor 29 that senses a torque applied to an input shaft 5 and another torque sensor 30 that senses a torque applied to an output shaft 10. In addition, Tokoro discloses a sensor 31 that senses a rotation speed of a drive pulley 6, 7; a sensor 32 that senses a rotation speed of a driven pulley 8, 9; a throttle actuator 35 that controls the open degree of a throttle valve; and an accelerator pedal sensor 36 that senses a depression degree of an accelerator pedal 38. However, Tokoro merely discloses a memory that stores an optimum ratio between the torque of the output shaft and the torque of the input shaft torque; a means that calculates the ratio between the torque of the output shaft and the torque of the input shaft torque, and a means that controls the line pressure applied to the driven pulley when the calculated ratio is larger or smaller than the optimum ratio.

The PTO asserts that the signal from the torque sensor 29 is obtained by estimating an engine torque in accordance with vehicle operating conditions and the target shift ratio. It is respectfully submitted that the signal from the torque sensor 29 is not such an estimated engine torque signal but merely an input shaft torque signal. In addition, there is nothing to teach or suggest from Tokoro that the signal from the torque sensor 29 is obtained using a target shift ratio. In addition, the PTO asserts that the signal from the torque sensor 30 is obtained by detecting the engine torque. It is respectfully submitted that the signal from the torque sensor 30 is not such an engine torque signal but merely an output shaft torque signal.

Because Tokoro does not teach or suggest the first and second torque signals required by claims 1 and 4, they are allowable over Tokoro.

Claim 7 is drawn to a method requiring the steps of “inputting a first torque signal obtained by estimating an engine torque in accordance with vehicle operating conditions and the target shift ratio; inputting a second torque signal obtained by detecting the engine torque; synthesizing the first and second torque signals to provide an estimated-torque signal; and controlling the line pressure in accordance with the estimated-torque signal.” As discussed above, Tokoro does not teach or suggest the first and second torque signals required by claim 7. Thus, claim 7 is allowable over Tokoro.

Claims 2, 5, and 8 depend from claim 1, 4, or 7 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable limitations contained therein.

For at least these reasons, favorable reconsideration is respectfully requested.

Rejection of Claims 3, 6, and 9 based on Tokoro and Hendriks

Claims 3, 6, and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tokoro in view of U.S. Patent 5,431,602 (“Hendriks”). For at least the following reasons, this rejection is traversed.

Claim 3, 6, and 9 depend from one of independent claims 1, 4, or 7 and contain all the limitations of their respective independent claims. As presented above, Tokoro does not teach or suggest the first and second torque signals as required by independent claims 1, 4, and 7. Hendriks does not cure this deficiency. Thus, claims 3, 6, and 9 are allowable for at least these reasons without regard to the further patentable limitations contained therein. Favorable reconsideration is respectfully requested.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment,

to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 9/14/2006

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Title: SYSTEM AND METHOD OF CONTROLLING V-BELT TYPE CONTINUOUSLY VARIABLE TRANSMISSION

Inventor(s): Masahiro YAMAMOTO et al.
Appl. No.: 10/674,818

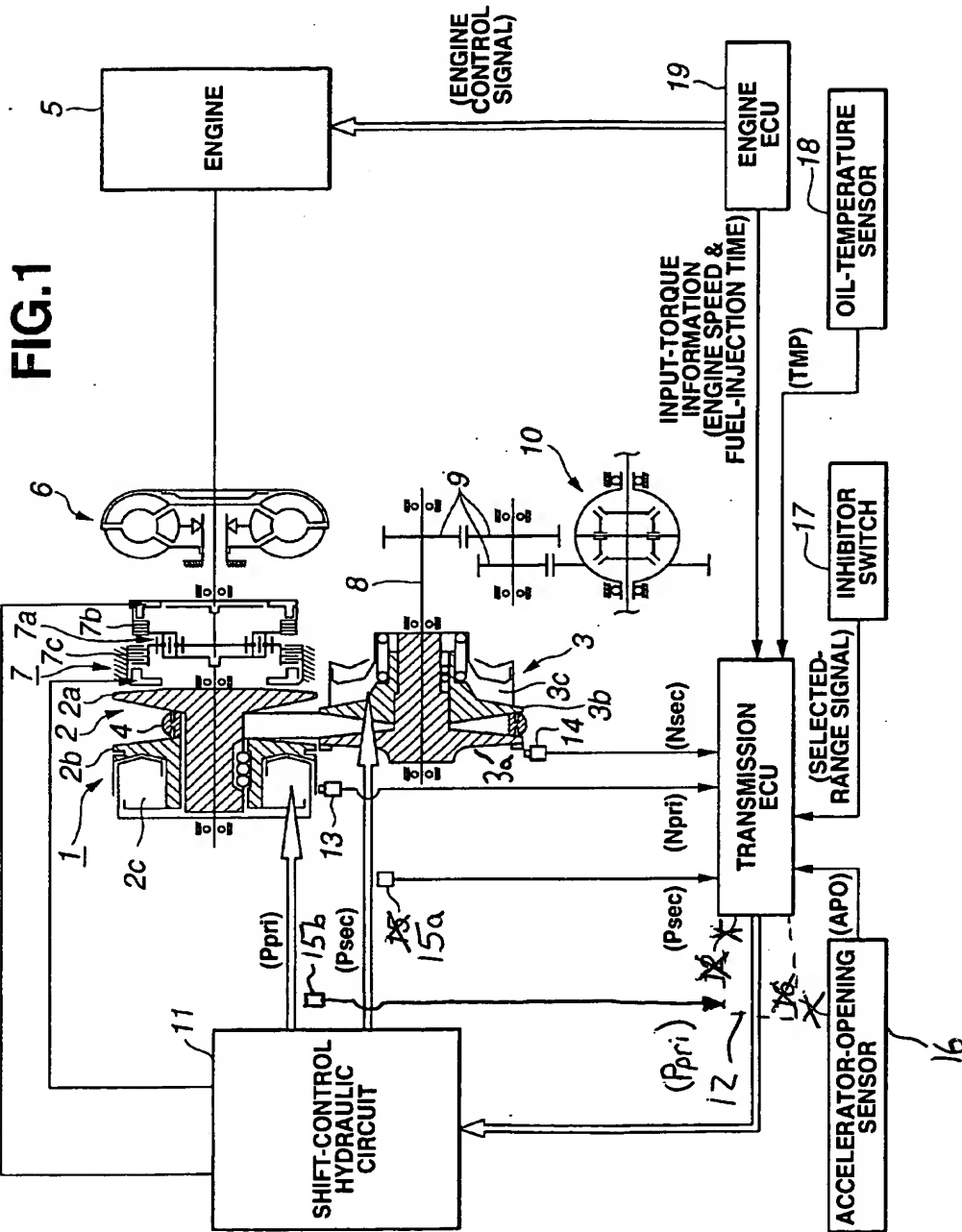


FIG.2

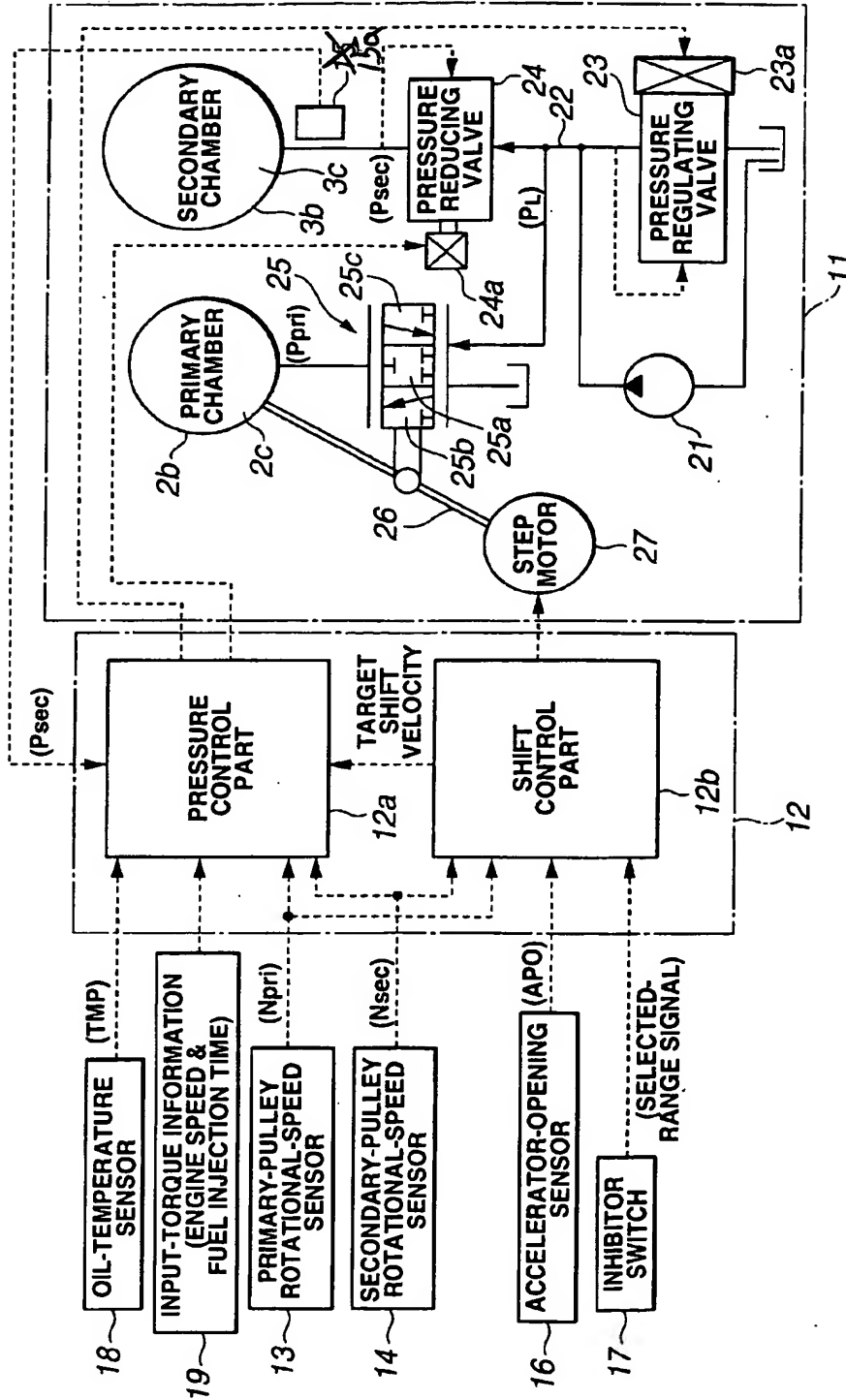


FIG.4

